

METHOD, SYSTEM AND COMPUTER PROGRAM PRODUCT FOR  
MULTIDISCIPLINARY DESIGN ANALYSIS OF STRUCTURAL  
COMPONENTS

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ABSTRACT OF THE DISCLOSURE

10 The method, system and computer program product for design analysis of a  
component efficiently subject a finite element model of the component to the  
appropriate thermo-mechanical environment(s), evaluate the component's stress  
responses to the environmental loads, and compare the stress responses to pre-selected  
limits. In addition, the method, system and computer program product accurately  
15 identify potential failure points of the component and the interconnect structure of the  
component, identify the type of environmental load that caused the failure, prompt the  
user to modify the design or other user-defined parameter of the component, and  
further test a finite model of the modified component. Thus, the method, system and  
computer program product provide an economical and timely design analysis for  
components that enables users to determine the appropriate design for the components  
based upon the type of thermo-mechanical environment(s) to which the component  
will be subjected over its lifetime.

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